branches may be outlined as follows: A few small branches may be seen to rise from the bases of the larger ones in almost any mature shrub. When the older branches may be said to reach a state of senescence, by reason of overflowering, the suckers are noticeably abundant and relatively large, and finally, by the time the twigs of the parent branch are dead, they have assumed its form, have taken on its functions and have gradually replaced it. Through the vegetative rejuvenescence the rhododendron as a plant normally does not die, and it therefore may be considered, as Muir looks upon the big tree, as practically immortal.

A KEY TO THE NORTH AMERICAN SPECIES OF CORTINARIUS. — I

By F. S. Earle

The genus *Cortinarius* is one of the largest and most interesting among the mushrooms, many of the species being of considerable size and very attractive in coloring. As a rule they are found during late summer and fall, many of them occurring after the weather has become quite cool. Many of the species are edible and so far as known none of them are dangerously poisonous.

The sections and subgenera in *Cortinarius* are for the most part quite well marked and the study of the genus is made difficult by the great number of species and our limited knowledge of them rather than by any lack of good specific characters. In this genus the study of the earlier stages as well as of the fully developed plant is unusually important. The color of the young lamellae in particular should always be noted.

It should be borne in mind, as was stated at the beginning of this series of papers, that these keys are based on the existing literature only, and not on a study of the plants themselves. They are intended solely as an aid to the beginning of the serious study of these interesting plants and not to express final convictions in regard to their relationships.

KEY TO THE SUBGENERA OF CORTINARIUS

1. Universal veil * present when young. 2.
   Without an evident universal veil. 3.
2. Universal veil glutinous; the stipe consequently viscid. *Myxacium.*
   Universal veil fibrous; stipe lanate or scaly, peronate. *Telamonia.*
3. Stout; pileus thick and fleshy. 4.
   Smaller and more slender; pileus thin at least at the margin. 5.
4. Pileus viscid. *Phlegmacium.*
   Pileus dry, often sqamulose. *Inoloma.*
5. Pileus dry, at first villous or hirsute, sometimes becoming glabrate with age. *Dermocybe.*
   Pileus moist, hygrophanous, glabrous, or with marginal whitish fibrils. *Hydrocybe.*

PHLEGMACIUM

1. Stipe stout, fleshy. 2.
   Stipe slender, subcartilaginous; cortina medial. Section *Elastici.*
2. Stipe short, bulbous; cortina basal attached to margin of bulb. Section *Scauri.*
   Stipe longer, cylindrical or bulbous; cortina superior. Section *Cliduchi.*

Cliduchi

1. Lamellae at first whitish or pallid. 2.
   Lamellae at first violet or purple. 5.
   Lamellae at first olivaceous. 7.
2. Pileus pallid or alutaceous. *C. sebaceus* Fr.
   Pileus brown with radiating gray center; stipe brown. *C. radians* Earle.
   Pileus reddish-brown. 3.
   Pileus yellow or ochraceous. 4.
3. Stipe spotted. *C. maculipes* Pk.
   Stipe smooth, whitish. *C. nudipes* Earle.
4. Stipe attenuate below, at first scaly. *C. clavicolor* Fr.
   Stipe equal, at first lanate. *C. turmalis* Fr.
5. Pileus dark-brown, fuliginous or fulvous. *C. varius* (Schaeff.) Fr.
   Pileus light-brown or gray. 6.
6. Stipe long, 10–15 cm. *C. sphagnophilus* Pk.
   Stipe short, 2–5 cm. *C. lanatipes* Pk.
7. Pileus viscid, the margin at length revolute. *C. infractus* (Pers.) Fr.
   Pileus glutinous, the margin strongly involute. *C. glutinosus* Pk.

* It is unfortunate that the term "veil" is used in mycology for two entirely different things. As here used it refers to a more or less well developed external covering of the entire young plant. It is the structure which when fully developed as in *Amanita* becomes a volva. The inner veil or preferably the cortina is a fibrous or membranous covering of the young lamellae. When fully developed it remains as a permanent annulus on the stipe. In this genus the cortina is usually cobweb-like and is soon evanescent.

Scauri

1.	Lamellae at first white or pallid.	2.
	Lamellae at first blue, purple or violet.	5.
	Lamellae at first yellow or brownish.	7.
	Lamellae at first olivaceous.	9.
2.	Pileus dark bluish-violet, brown punctate.	*C. caesius* Clem.
	Pileus light red.	*C. sublateritius* Pk.
	Pileus yellow.	3.
	Pileus reddish-brown or orange brown.	*C. coloratus* Pk.
	Pileus white or whitish.	4.
3.	Pileus reticulate-rugose.	*C. corrugatus* Pk.
	Pileus smooth.	*C. intrusus* Pk.
4.	Lamellae crowded.	*C. albidus* Pk.
	Lamellae not crowded.	*C. communis* Pk.
5.	Pileus blue when young, fading to argillaceous.	*C. caerulescens* Fr.
	Pileus pale ochraceous.	*C. Copakensis* Pk.
	Pileus dark reddish-brown to olivaceous.	6.
6.	Flesh blue.	*C. purpurascens* Fr.
	Flesh yellow.	*C. glaucopus* (Schaeff.) Fr.
	Flesh white.	*C. calochrous* (Pers.) Fr.
7.	Stipe ochraceous; pileus with red fibrils.	*C. virgatus* Pk.
	Stipe white.	8.
8.	Stipe silky, striate.	*C. luteo-fuscus* Pk.
	Stipe smooth, shining.	*C. turbinatus* (Bull.) Fr.
9.	Pileus spotted; stipe striate.	*C. scaurus* Fr.
	Pileus not spotted; stipe silky.	*C. olivaceus* Pk.

Elastici

1.	Lamellae at first white.	*C. amarus* Pk.
	Lamellae at first violet-purple.	*C. porphyropus* Fr.
	Lamellae at first brownish.	2.
2.	Pileus reddish-yellow.	*C. ophropus* Pk.
	Pileus ochraceous.	*C. longipes* Pk.
	Pileus cinereous.	*C. lapidophilus* Pk.

MYXACIUM

Stipes floccose, the flocci at first covered with glutin.	Section *Colliniti*.
Stipes viscid, not floccose.	Section *Delibuti*.

Colliniti

1.	Lamellae at first white, pallid or argillaceous.	2.
	Lamellae at first yellow or brownish.	*C. muscigenus* Pk.
2.	Pileus orange brown.	3.
	Pileus fuscous or ochraceous.	4.
3.	Lamellae at first bluish-argillaceous; stipe floccose.	*C. collinitus* (Pers.) Fr.
	Lamellae at first white; stipe silky.	*C. mucosus* Fr.
4.	Stipe subconcolorous, floccose.	*C. sphaerisporus* Pk.
	Stipe white or lilac tinted, silky tomentose.	*C. elatior pallidifolius* Pk.

Delibuti

1. Lamellae at first white or pallid.	*C. splendidus* Pk.
Lamellae at first some tint of blue or violet.	2.
3. Pileus violet-purple.	*C. iodes* B. & C.
Pileus yellow.	*C. Berlesianus* Sacc. & Cub.

TWO NEW SPECIES OF SELAGINELLA IN THE SOUTHERN FLORA

By Lucien M. Underwood

Although the number of species in the *Selaginella rupestris* group has increased from three to sixteen within the limits of the United States through the work of the writer and that of Dr. Georg Hieronymus, of Berlin, the mine does not appear to be exhausted yet. The two following species are representatives of the flora of North Carolina, the first from the sandy barrens of the coastal plain and the second from the highlands at the opposite side of the state.

Selaginella acanthonota sp. nov.

Stem and branches stout, ascending, sending out abundant rootlets from the upper portions, softly hairy at the tips. Leaves in 8–10 regular series, 2 mm. long, gradually tapering into a roughened soft white awn one half to one third their length, with about 12 short irregular cilia on either side of the dorsal groove; strobiles fully 10 mm. long, quadrangular, the sporophylls broadly triangular and ciliate like the stem leaves.

Growing in sand along the coast and near it, North Carolina. A small fragmental specimen of this species was collected many years ago by Mr. Curtis and is in the Torrey herbarium; more abundant material was collected during the summer of 1899 in pine barrens near Wilmington, by Professor C. L. Williamson and has been grown in the conservatories of the New York Botanical Garden. The plant is a close ally of *S. rupestris* but differs notably in the regularly many-ranked leaves, in the dorsal cilia, from which the species receives its name, and in other characters.

Selaginella Sherwoodii sp. nov.

Plants forming densely branched compact tree-like tufts 6–8 cm. high. Stems repeatedly branching, erect or ascending, root-